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Report of the Board of Auditors

for the year ended 31 December 2013

Volume V
Capital master plan

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Note

Symbols of United Nations documents are composed of letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

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Letter of transmittal

Letter dated 30 June 2014 from the Chair of the Board of Auditors addressed to the President of the General Assembly

I have the honour to transmit to you the report of the Board of Auditors on the capital master plan for the year ended 31 December 2013.

(*Signed*) Sir Amyas C. E. **Morse**
Comptroller and Auditor-General of the
United Kingdom of Great Britain and Northern Ireland
Chair of the Board of Auditors

Capital master plan: key facts

Cost

$1,995 million	Total budget
$2,215 million	Total anticipated construction cost (11 per cent over $1,991 million construction budget)
$2,374 million	Total anticipated final cost to the United Nations, including associated costs (19 per cent over budget)

Timeline

June 2013	Planned completion date for all project work
April 2015	Revised planned completion date for all project work
June 2015	Financial closure of the capital master plan

Scope

Secretariat	Completed and handed over
Conference Building and basements	Substantially completed
General Assembly Building	Planned to be available for the general debate in September 2014
Library and South Annex Buildings	Work stopped; no plans for renovation
North Lawn Building	Planned for demolition in 2015

Summary

Background

1. The refurbishment by the United Nations of its Headquarters in New York, the capital master plan, is a complex, high-value project aimed at modernizing, securing and preserving the architecture of the 1950s campus, and improving the operating efficiency of the buildings, without compromising day-to-day operations. The approved scope of the project includes:

- Renovating five major buildings (the Secretariat Building, the Conference Building, the General Assembly Building, the Dag Hammarskjöld Library Building and the South Annex Building) as well as the extensive basement complex while maintaining live operations;
- Constructing a temporary secure building (the North Lawn Building) to house certain activities normally carried out in the General Assembly Building, the Conference Building and the Secretariat Building while those buildings were being renovated, and demolishing it after the completion of their renovation;
- Moving staff into and back from temporary office space across New York City (with more than 10,000 staff moves involved).

2. The General Assembly approved the original aims of the project in 2002 and the current implementation strategy (accelerated strategy IV) in 2007. In its previous report, the Board reported extensively on subsequent changes in cost, schedule and scope. One key event was the introduction in 2012 of more stringent bomb blast standards (the enhanced security upgrade). This resulted in a budget increase of $100 million (borne by the host country), a one-year delay and the suspension of the refurbishment of the Library and South Annex Buildings. A summary of key events over time is presented in **figure III**.

3. The project is now approaching closure, with the substantial completion of the General Assembly building planned for September 2014; all other construction work, including the dismantling of the North Lawn Building and landscaping, expected to be completed by April 2015; and financial closure of the project planned for June 2015. Renovation of the Library and South Annex Buildings, and work on the service drive on 42nd and 48th Streets, will not be completed before project closure.

Scope of the report

4. In its resolution 57/292, the General Assembly requested an annual report from the Board of Auditors on the capital master plan. This eleventh annual Board report on the project assesses the progress made as at 31 March 2014 in the following areas:

- Project budget, costs and financing (see sect. B);
- Project schedule and scope (see sect. C);
- Managing the project to a successful completion (see sect. D).

5. The Board proposes that, given the forecast completion of the capital master plan in June 2015, the report scheduled to be presented to the General Assembly at its seventieth session be the final Board report on the project.

Key findings

6. The Board acknowledges that there has been significant progress on the capital master plan and notes that costs have largely been contained since it last reported in 2013, reflecting the highly skilled and agile approach of the Office of the Capital Master Plan in the face of demanding deadlines. Greater certainty is now needed with respect to how the project will be completed to secure maximum return on the significant investment made by Member States.

Anticipated final cost

7. **Since the Board last reported, the estimated total cost to the United Nations is largely unchanged at $2,374 million, reflecting a $379 million (19 per cent) cost overrun against the consolidated budget, which takes into account the associated costs[1] of the project and the cost of the secondary data centre** (see **table 1**). The cost overrun comprises:

- A forecast cost overrun of $224 million (11 per cent) in construction costs. The overrun represents the difference between the anticipated final project (construction) costs of $2,215 million and the approved budget for the construction work of $1,991 million;
- Final associated costs of $140 million, reflecting a decrease of $4 million since the Board last reported. The associated costs were approved but unbudgeted (not included in the original project budget);
- The $15 million approved but unbudgeted element of the total $19 million costs for the secondary data centre (peacekeeping operations made a $4 million contribution).

Table 1
Projected costs, budget and cost overrun as at March 2014[a]
(Millions of United States dollars)[b]

	Project (construction) costs	*Associated costs*	*Secondary data centre*	*Total*
Approved budget	1 877			
Donations	14			
Enhanced security upgrade	100			
Contribution to secondary data centre			4	
Total consolidated budget	**1 991**	**0**	**4**	**1 995**
Anticipated final costs	2 115			
Enhanced security upgrade	100			
Associated costs[c]		140		
Secondary data centre[c]			19	
Total anticipated final cost	**2 215**	**140**	**19**	**2 374**
Variance between budget and anticipated final cost	**(224)**	**(140)**	**(15)**	**(379)**

Source: Board analysis of the Administration's data and General Assembly resolutions.
[a] Annex IV presents a more detailed breakdown of budget and costs.
[b] Values are rounded to the nearest million.
[c] These costs were not included in the approved capital master plan budget, and the General Assembly requested that they be absorbed from this budget.

8. **The $379 million overrun relates to issues that arose and events that occurred earlier in the project, and no new risks or significant cost increases have occurred in the period under review.** Cost overruns are common in major construction projects, particularly in a project of the size and complexity of the capital master plan. Beyond the unbudgeted associated costs and costs of the secondary data centre, the Administration has over time reported increases in construction costs as risks have materialized, and professional service fees have increased owing to changing market conditions. In addition, the decision to accelerate delivery in 2007 led to the signing of contracts before designs were complete, with the subsequent changes leading to additional work and change orders, and therefore increased costs. Some construction work will now be deferred beyond the project's closure in June 2015 and could result in additional expenditure for the United Nations.

9. **While continuing to acknowledge the Administration's robust approach to the control of construction costs, the Board can provide no assurance as to the robustness of the Administration's forecasting of anticipated final costs.** The Administration has only partially implemented the Board's previous recommendations in its approach to forecasting. Identified risks are not routinely quantified or explicitly linked to the forecast for the anticipated final cost of the project. Nor does the forecast take account of the potential liability for future change orders, claims or the costs of unexpected acceleration needed to complete the project.

Project financing

10. **The Administration is using reserve accounts as an interim mechanism to help finance the cost overrun.** In December 2013, the General Assembly approved $159 million in additional funding from the working capital reserve fund and associated interest,[2] leaving a $220 million funding gap (see **figure I**) comprising:

- $155 million in unbudgeted costs, comprising associated costs ($140 million) and the costs of the secondary data centre ($15 million);
- $65 million in construction costs.

11. Notwithstanding requests made by the General Assembly, it was not possible to absorb the associated costs and the costs of the secondary data centre from the budget of the capital master plan. The Administration reported that continued use of the capital master plan budget threatened the liquidity of the project.[3] In April 2014, the Assembly, in its resolution 68/247 B, approved the use of the working capital fund and the special account[4] as an interim financing mechanism for the remaining unfunded amount of $220 million. This matter will be revisited by the Assembly at its sixty-ninth session.

12. The Administration proposed the use of the $65 million estimated budget for the renovation of the Library and South Annex Buildings to fund the $65 million gap in construction funding (see A/68/352). In resolution 68/247 B, the General Assembly reaffirmed that the buildings remained part of the scope of the capital master plan, but agreed that there was a need to maintain the liquidity of the project. The use of the funds represents an increase in the cost of those elements of the project that remain in scope and does not reduce the total cost overrun of the project.

Project schedule

13. **At the time of reporting, taking into account the work remaining and the known risks, the Administration is on track to hold the September 2014 general debate in the refurbished General Assembly Building, although some work will be deferred until a later date.** The completion of the General Assembly Building against a compressed timetable was a key risk highlighted in the Board's previous report. The Administration has dealt with a later-than-planned start, inclement weather and deficiencies in the quality of design drawings, all of which have slowed progress. Project risks remain, in particular the limited amount of time available to test and commission audiovisual systems, an issue that contributed to the delays in completing the Conference Building.

14. **The capital master plan is expected to end in June 2015.** Accelerated strategy IV planned for the renovation of the five buildings, the demolition of the North Lawn Building and the completion of final landscaping by mid-2013. The renovation of United Nations Headquarters will be substantially complete upon the completion and reoccupancy of the General Assembly Building in September 2014. The remaining scope includes the completion of the basements (October 2014), the disassembly and removal of the temporary North Lawn Building (January 2015) and final landscaping (April 2015), with the financial and administrative close-out of the project and the closure of the Office of the Capital Master Plan by June 2015.

Project scope

15. **The project will end without the renovation of the Library and South Annex Buildings.** The Administration has provided options on possible alternative locations for the functions carried out in those buildings, but a solution has not been finalized. Given the planned closure of the capital master plan in June 2015, any solution will require additional financing, a project plan and a team to deliver it.

16. **The project will end without undertaking work on the service drive on 42nd and 48th Streets.** This task was expected to take up to 18 months to complete, at a cost of $15 million to $20 million. The Administration is awaiting permits from the host city to start it, and informed the Board that the Office of Central Support Services would assume responsibility and the associated budget for completing the work.

Project governance

17. **The Administration rejected the Board's recommendation that it establish an independent assurance mechanism to support the senior responsible owner's ability to govern the project.** Established good practice in the delivery of major projects is to provide expert advice, independent of the project team, to the senior responsible owner through a system of independent project assurance. This issue requires serious consideration in the context of future major projects, in order to help ensure that projects have the best start possible.

Handover

18. **A well-managed handover is essential to securing the benefits of the newly refurbished buildings as envisaged at the start of the project.** The level of effort required for making the transition from renovation to everyday operations should not be underestimated, and the phased handover process has been challenging. In some instances in which maintenance contracts were not in place, the Office of Central Support Services has used short-term warranties or the Office of the Capital Master Plan to manage systems or buildings.

Flexible workspace

19. **To secure further benefits from the significant investment of Member States in the capital master plan, and with the likelihood of other significant expenditure on the United Nations estate, the Administration urgently needs to evaluate the potential costs and benefits that more flexible workplace strategies could achieve, in particular the potential for a significant reduction in the requirement of Headquarters for rented real estate in New York.** In the latter half

of 2014, the Administration intends to pilot flexible office solutions that move away from a one-person-to-one-desk ratio and make far more efficient use of office space. Introducing flexible workspace approaches is a significant change management initiative and will require integrated input from facilities, information and communications technology and human resources management and, importantly, strong support and visible leadership from senior management.

Long-term asset management

20. **The Administration does not currently have a long-term asset management plan for the renovated campus.** A long-term asset management plan could help prolong the life of the United Nations estate and reduce the likelihood of significant future major capital investments. The Administration's recent review of its estate maintenance needs (the "strategic capital review") is a positive step towards the development of a proactive long-term asset management strategy. The Administration is currently collecting data from its global estate, including United Nations Headquarters, to enable it to forecast capital requirements over 20 years in order to maintain the facilities in accordance with industry norms and standards. While the useful life of the exterior of buildings could be 50 years, systems and services will require regular maintenance, and more sophisticated plant and equipment might need constant care.

Applying the lessons of the capital master plan

21. **The Administration is applying learning from the capital master plan in the planning for the renovation of the United Nations headquarters in Geneva (the "strategic heritage plan"[5]).** Unlike the capital master plan, the strategic heritage plan incorporates the associated costs as part of the total project requirements. It also proposes a governance structure, as recommended by the Advisory Committee on Administration and Budgetary Questions,[6] which includes a steering committee independent of the project team, to scrutinize the cost, schedule and scope of the renovation of offices in Geneva and decide on the use of contingency funding. In the meantime, the Board has prepared a detailed paper on lessons learned from the capital master plan, which it will publish on its website.

Overall conclusion

22. The progress and substantial delivery of the capital master plan is a significant achievement given the project's complexity and difficult start. The main buildings and basements are complete or substantially complete, and at the time of audit there was every indication that the last major building to be refurbished, the General Assembly Building, would be sufficiently ready to host the general debate in September 2014. This is testimony to the expert and committed work of the Office of the Capital Master Plan and its contractors.

23. The Administration anticipates that the project will close in June 2015 without the renovation of the Library and South Annex Buildings or the carrying-out of the work on the service drive on 42nd and 48th Streets; 17 months after the original renovation work completion date; and with a $379 million cost overrun. Although some of the factors contributing to cost overruns and delays were beyond the control of the Administration, there are lessons that need to be applied from the outset to future United Nations capital projects, especially in terms of the completeness and realism of budgets for the renovation of ageing buildings. With risks still to be managed, the capital master plan would benefit from greater clarity regarding: (a) the planning and delivery of final project completion and handover to the Administration; and (b) the cost and budgetary implications of work that remains to be completed after the Office of the Capital Master Plan is closed in June 2015.

24. While there is a strong focus on physical and technical delivery, uncertainty remains about the extent to which anticipated benefits will be realized. There are, however, positive steps being taken towards the adoption of modern estate management approaches such as flexible workspace solutions and a long-term asset management strategy. While both of those initiatives should have been considered much earlier, they will represent a considerable opportunity to improve value for money in the use of the United Nations global estate if approved by the General Assembly and implemented successfully.

Recommendations

25. **The Board recommends that the Administration:**

(a) **Clarify to the General Assembly during the main part of its sixty-ninth session which elements of the scope of the project will not be delivered as part of the capital master plan and define plans for delivery and any budgetary implications. Elements of the capital master plan are currently scheduled for delivery after the Office of the Capital Master Plan closes;**

(b) **Apply independent project assurance to all major projects. There is currently no established approach to providing independent project assurance in the United Nations;**

(c) **Review maintenance arrangements on the basis of the operating data with respect to new assets currently being collected and assess possibilities for obtaining better value for money for the Administration's requirements. As previously recommended, it is important to gather operating data about new assets, such as energy consumption, maintenance patterns and the skills required for the servicing of plant and equipment, so that contractors can bid on an informed basis. This should provide the Administration with a clearer view of its overall maintenance requirements;**

(d) **Commit to visible senior management leadership on the flexible workspace project. Experience suggests that, like all change initiatives that have an impact on the day-to-day working environment, senior management leading by example will be vital in gaining staff buy-in and securing the intended benefits.**

[1] Associated costs relate to goods and services that, while made necessary by the work of the capital master plan, are not directly attributable to the planned refurbishment, and were therefore excluded from the original budget. During the construction period of the capital master plan, temporary increases in staffing and operational costs were required in certain parts of the Secretariat Building, for example, the offices of the Department of Safety and Security.

[2] The working capital reserve fund for the capital master plan was approved in December 2006 (see General Assembly resolution 61/251). The purpose of this reserve account was to cover temporary cash flow deficits. (See also A/61/549, para. 44, and A/61/595, para. 15).

[3] In October 2013, the Advisory Committee on Administrative and Budgetary Questions reported that the cash balance would be fully utilized towards the end of April 2014 (see A/68/551).

[4] The working capital fund and the special account are reserve accounts used to provide short-term liquidity for regular budget operations.

[5] A/68/733.

[6] See A/68/585.

A. Background

The project and its objectives

1. The refurbishment by the United Nations of its Headquarters in New York, the capital master plan, is a complex, high-value project aimed at modernizing, securing and preserving the architecture of the 1950s campus without compromising day-to-day operations. The approved scope of the project includes:

- Renovating five major buildings (the Secretariat Building, the Conference Building, the General Assembly Building, the Dag Hammarskjöld Library Building, and the South Annex Building) as well as the extensive basement complex while maintaining existing operations;
- Constructing a temporary secure building (the North Lawn Building) to house certain activities normally carried out in the General Assembly Building, the Conference Building and the Secretariat Building while those buildings were being renovated, and demolishing it after the completion of their renovation;
- Moving staff into and back from temporary office space across New York City (with more than 10,000 staff moves involved).

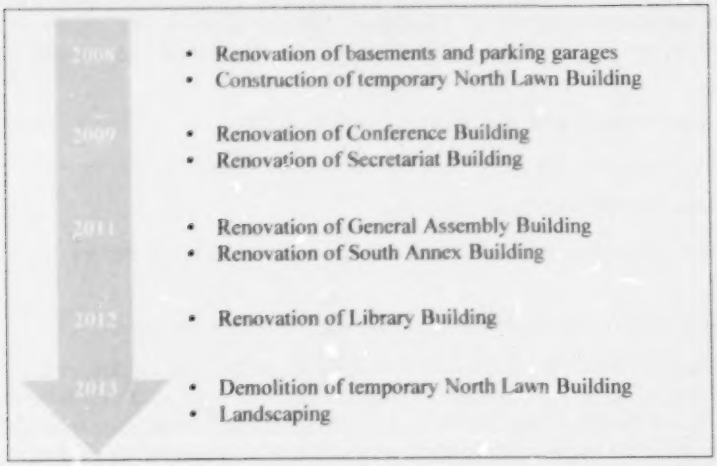
2. The expected outcomes of the project (see A/55/117) were to deliver a headquarters campus that:

- Is energy-efficient, free of hazardous materials and compliant with the building, fire and safety codes of the host city;
- Provides full accessibility to all persons;
- Meets all reasonable, modern-day security requirements;
- Preserves the original architecture to the greatest extent possible.

3. In addition, the scope of work for the General Assembly Building is expected to provide significant security upgrades. For example, the hardening of structural elements of buildings and the installation of blast-rated glazing will achieve compliance with the updated criteria for blast protection. There will also be improvements to and expansion of the access control and electronic security systems.

4. The General Assembly approved the original aims of the project in 2002 (see resolution 57/292) and the original budget of $1,877 million in 2006 (see resolution 61/251). In 2007, an accelerated strategy was adopted, involving increased costs and a shorter period of renovation to minimize disruption to United Nations operations. **Figure I** outlines the timeline of key construction work set out in accelerated strategy IV, which remains the current implementation strategy.

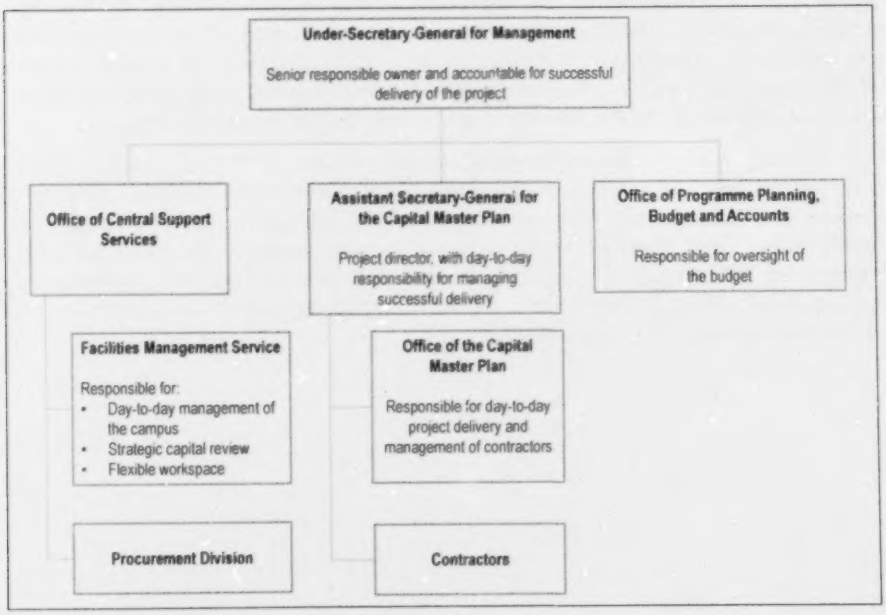
Figure I
Original scope and timeline of the capital master plan



Source: Board analysis of the accelerated strategy IV schedule.
Note: Year indicates initial start date of subproject.

5. In 2003, the United Nations established the Office of the Capital Master Plan to manage the delivery of the project, by working with other parts of the Administration. The Office reports to the Under-Secretary-General for Management, who is the senior responsible owner of the project (see **figure II**).

Figure II
Key responsibilities for the delivery of the capital master plan


Under-Secretary-General for Management
Senior responsible owner and accountable for successful delivery of the project
Office of Central Support Services
Assistant Secretary-General for the Capital Master Plan
Project director, with day-to-day responsibility for managing successful delivery
Office of Programme Planning, Budget and Accounts
Responsible for oversight of the budget
Facilities Management Service
Responsible for:
• Day-to-day management of the campus
• Strategic capital review
• Flexible workspace
Office of the Capital Master Plan
Responsible for day-to-day project delivery and management of contractors
Procurement Division
Contractors

Source: Board interviews with the Administration.

Developments in the project since the Board last reported

6. The key stages in the development of the strategy and budget for the delivery of the capital master plan are summarized in **figure III** and **annex I**. The project is entering the final phase of construction work, and as at the end of the reporting period:

- The Secretariat Building had been handed over (July 2013);
- The South Screening Building had been opened to staff (February 2014);
- The basements were substantially complete;
- The Conference Building had a number of items to be resolved before final handover;
- Refurbishment of the General Assembly Building was well progressed.

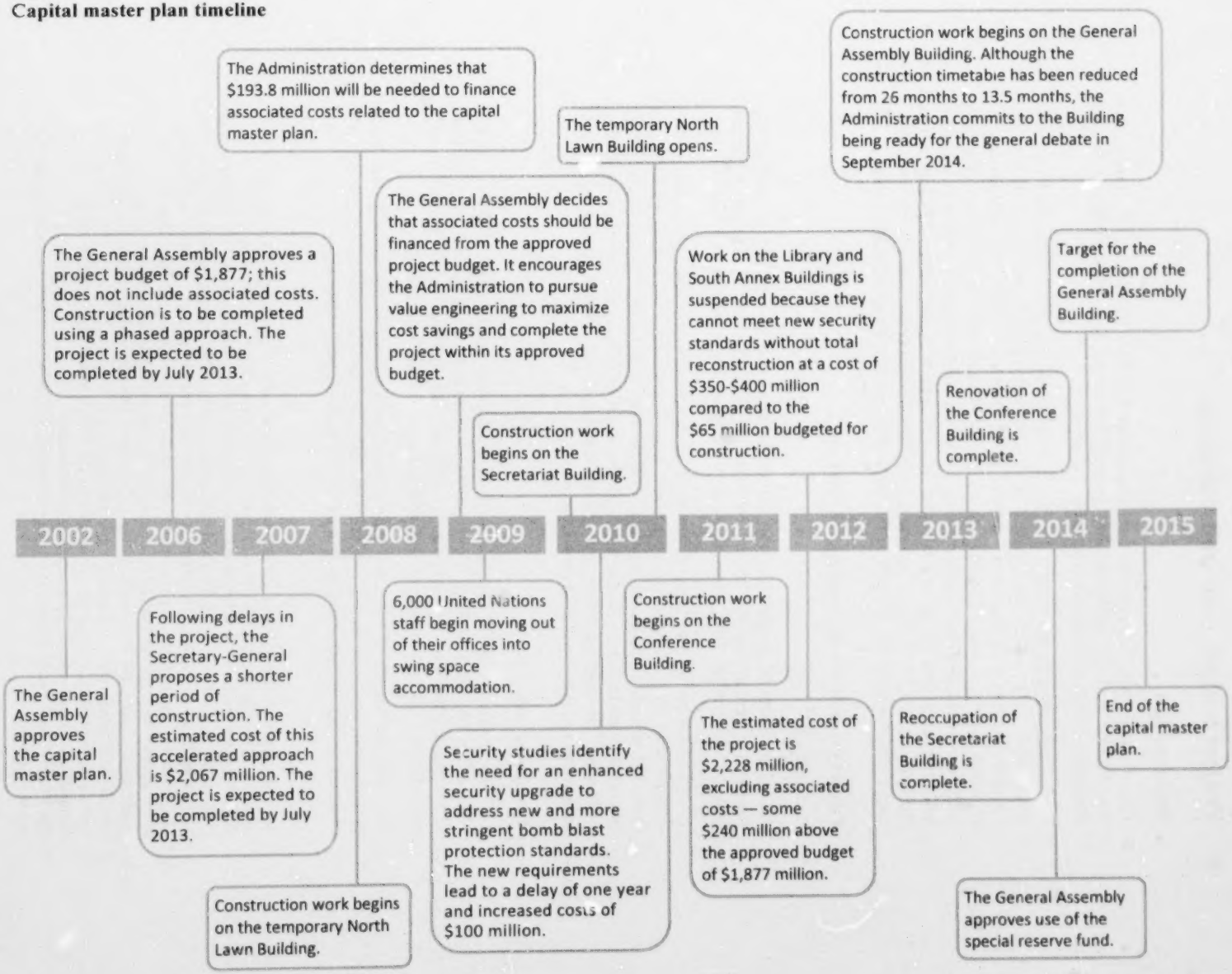
7. At its sixty-eighth session, the General Assembly authorized in December 2013 the use of the balance of the working capital reserve fund (see resolution 68/247 A), and in April 2014 the use of the working capital fund and special account, as an interim financing mechanism to meet the unfinanced part of the currently anticipated final cost overrun of $379 million (see resolution 68/247 B). The anticipated cost overrun and plans for project financing are commented upon in section B of the present report. **Annex II** provides a summary of the changes in the budget and anticipated final cost estimates over time.

Previous recommendations

8. Of the nine recommendations made in the Board's previous report (A/68/5 (Vol. V)), two (22 per cent) have been implemented and four (44 per cent) are under implementation. Progress continues to be made in sharing learning from the capital master plan and developing an approach to the implementation of flexible workspace strategies. The Board has closed three unimplemented recommendations with regard to determining the anticipated final costs, developing a contingency plan for the completion of the General Assembly Building and gaining independent assurance with respect to the plan to complete the General Assembly Building.

9. The project is entering its final stages, and the amount of work remaining and therefore the level of funding at risk have been significantly reduced. Although previous recommendations may no longer be as important in the context of the capital master plan, they are highly relevant to and important for the successful delivery of future capital projects. **Annex III** summarizes the position on implementation. Further commentary on previous recommendations is contained in the relevant sections of the present report.

Figure III
Capital master plan timeline


2002
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
The General Assembly approves the capital master plan.
The General Assembly approves a project budget of $1,877; this does not include associated costs. Construction is to be completed using a phased approach. The project is expected to be completed by July 2013.
Following delays in the project, the Secretary-General proposes a shorter period of construction. The estimated cost of this accelerated approach is $2,067 million. The project is expected to be completed by July 2013.
The Administration determines that $193.8 million will be needed to finance associated costs related to the capital master plan.
Construction work begins on the temporary North Lawn Building.
The General Assembly decides that associated costs should be financed from the approved project budget. It encourages the Administration to pursue value engineering to maximize cost savings and complete the project within its approved budget.
6,000 United Nations staff begin moving out of their offices into swing space accommodation.
Construction work begins on the Secretariat Building.
Security studies identify the need for an enhanced security upgrade to address new and more stringent bomb blast protection standards. The new requirements lead to a delay of one year and increased costs of $100 million.
The temporary North Lawn Building opens.
Construction work begins on the Conference Building.
Work on the Library and South Annex Buildings is suspended because they cannot meet new security standards without total reconstruction at a cost of $350-$400 million compared to the $65 million budgeted for construction.
The estimated cost of the project is $2,228 million, excluding associated costs — some $240 million above the approved budget of $1,877 million.
Construction work begins on the General Assembly Building. Although the construction timetable has been reduced from 26 months to 13.5 months, the Administration commits to the Building being ready for the general debate in September 2014.
Renovation of the Conference Building is complete.
Reoccupation of the Secretariat Building is complete.
The General Assembly approves use of the special reserve fund.
Target for the completion of the General Assembly Building.
End of the capital master plan.

B. Project budget, costs and financing

Project budget

10. As at 31 March 2014, the total consolidated budget for the capital master plan was $1,995 million, reflecting an in-year increase of $640,000, owing to further donations by Member States (see **table 2**).

11. There remains no budget for $155 million in approved costs. This includes associated costs, which the General Assembly requested to be absorbed into the construction costs of the capital master plan. In March 2014, the Administration reported the final total of associated costs[7] as $140 million, a $4 million reduction since the Board had last reported owing to the fact that the actual cost of some work had been lower than the value contracted for. The remaining unbudgeted $15 million is the balance of a $4.2 million budget and the $19.2 million final cost of the secondary data centre,[8] which was not part of the original scope of the capital master plan.

Project expenditure and anticipated final cost

Expenditure

12. The financial position of the capital master plan is reported as part of the financial statements of the United Nations (see A/69/5 (Vol. I)). For the biennium ended 31 December 2013, expenditure on the capital master plan was $470.4 million.

13. The Office of the Capital Master Plan continues to exert firm control over expenditure, with an experienced project team consistently reviewing construction costs, thoroughly checking change orders and negotiating firmly before any payment is made. This is consistent with the audit findings and reports of the Office of Internal Oversight Services over time (see A/67/330) and the review of contract awards by the Post-award Review Committee.[9]

Anticipated final cost

14. As at March 2014, the Administration forecast a total estimated cost to the United Nations of $2,374 million against an approved budget of $1,995 million, reflecting a combined cost overrun of $379 million (19 per cent). Further details regarding the current project budget and costs are set out in **annex IV**.

15. As at March 2014, the Administration estimated the anticipated final construction cost[10] to be $2,215 million, reflecting a $224 million (11 per cent)[11] overrun against an approved budget of $1,991 million (see **table 2**).

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[7] Associated costs relate to goods and services that, while made necessary by the work of the capital master plan, are not directly attributable to the planned refurbishment, and were therefore excluded from the original budget. During the construction period of the capital master plan, temporary increases in staffing and operational costs will be required in certain parts of the Secretariat Building, such as, for example, the offices of the Department of Safety and Security.

[8] The secondary data centre is a back-up data facility located off-campus in New Jersey.

[9] In the light of the large numbers of changes in designs as a result of the adoption of the accelerated strategy, the Post-award Review Committee was established in 2009 to enhance the scrutiny of change orders and contract amendments.

[10] This figure represents expenditure controlled by the Office of the Capital Master Plan and excludes associated costs and the secondary data centre.

[11] The $72 million increase in project funding reported last year has not been included in the total approved budget.

16. Most of the reasons for the anticipated cost overrun occurred in earlier periods and were reported in detail in previous Board reports. Since the Board's previous report, no new cost pressures or significant risks to the final anticipated cost have emerged, other than the previously reported ongoing risk of a compressed schedule (owing to the delayed start) for the completion of the General Assembly Building before the September 2014 general debate. The latest schedule position on the General Assembly Building is set out in section C of the present report.

Table 2
Budget and anticipated final cost as at March 2014
(Thousands of United States dollars)

	Capital master plan	*Associated costs*	*Secondary data centre*	*Total cost to United Nations*
Project budget	1 876 700		4 228	
Donations by Member States	13 873			
Enhanced security upgrade	100 000			
Total budget	**1 990 573**		**4 228**	**1 994 801**
Project construction costs	2 114 973			
Enhanced security upgrade	100 000			
Associated costs		139 524		
Secondary data centre			19 240	
Total costs	**2 214 973**	**139 524**	**19 240**	**2 373 737**
Project cost overrun	**(224 400)**	**(139 524)**	**(15 012)**	**(378 936)**
Percentage over budget	11%		355%	19%

Source: Board analysis of the Administration's data.

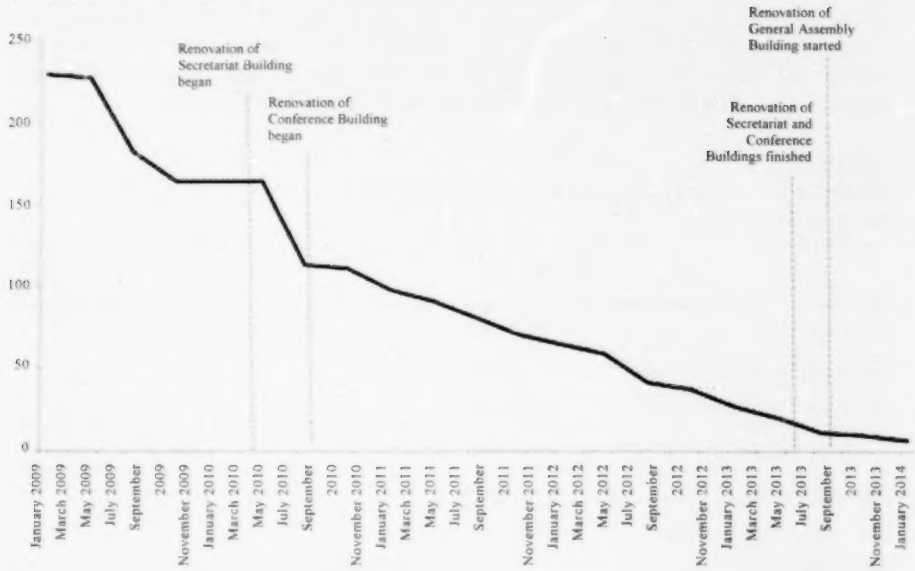
Estimating and reporting costs

17. A robust approach to estimating the anticipated final cost should take into account quantified risks, trends in change orders, potential future claims and the acceleration of construction activities. The Board has previously questioned the Administration's method of estimation (see paragraphs below).

Contingency funding and risk

18. The reported contingency funding within the capital master plan budget has diminished, but at the time of audit 19 of the 23 contracts remained open and construction work was ongoing. As at 31 March 2014, the Administration reported that $6 million in contingency funding remained for the completion of the project (see **figure IV**). While the risks may decrease as activity nears completion, with most contracts still open, there is the potential of additional costs arising from acceleration to meet the deadline of the general debate and from further change orders.

Figure IV
Reported contingency funding
(Millions of United States dollars)



Source: Board analysis of the Administration's data.

19. There may be additional sources of contingency funding within the project that could help manage cost pressures. As at March 2014 these included, potential unreported provisions of approximately $20 million previously allocated across a number of guaranteed maximum price contracts. The Administration does not report explicitly unused provisions because their value is uncertain until the guaranteed maximum price contract is closed. However, approximately $10 million of this amount has already been used to cover costs arising from known claims, acceleration and change orders. As the Board noted in its previous reports and its lessons learned paper, it considers that contingency funding should be available and used to manage risk, not general cost increases.

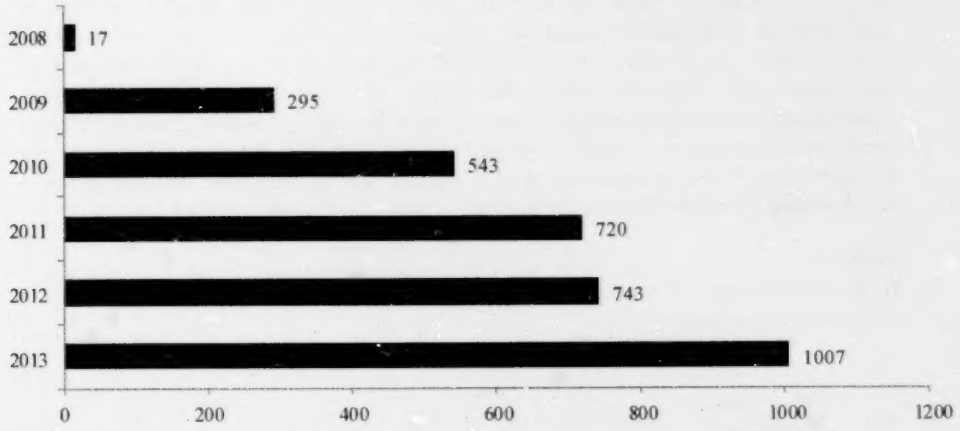
20. While acknowledging that expert judgement is being applied by the Office of the Capital Master Plan to manage risk, the Administration can provide only limited assurance that the remaining $6 million in contingency funding will be sufficient, because it has not quantified risks. The Board, in its previous report, acknowledged that exercises had been carried out in October 2012 and April 2013 to quantify project risks, but also noted that the Administration had not used this information to determine the level of contingency funding needed. The Administration has no plans to update its risk quantification exercise, as it considers all risks to have been mitigated and any remaining risks associated with the General Assembly Building to be minimal. The Administration informed the Board that in its view, if nothing else changed or occurred, the $6 million in contingency funding should be sufficient for the completion of the remaining work.

Change orders

21. The project continues to be subject to an especially high number of requests for change, including those involving high cost (see **figure V**). The volume of change orders has been driven to a large extent by the fact that there was a lack of accurate project data (design drawings, critical construction details) at project start-up. This meant that a significant proportion of the design had to be revised, with the result that a high level of additional construction-related and redesign costs was incurred. As construction projects near completion, contractors are often requested to undertake work for which they were not originally contracted, and on that basis the Administration can expect more change orders as contracts come to a close.

22. As at December 2013, a total of 3,325 change orders[12] had been submitted, with a total value of $157.7 million. The Administration does not include potential change order submissions in its forecast of the anticipated final cost of the capital master plan. While the Administration receives weekly reports of open cost events (notices that may turn into change orders), it assumes that changes can be covered from within the blanket contingency provision, calculated as a percentage of the expected expenditure. The Board has previously commented on the problems associated with the use of "blanket" contingency provisions (see A/65/5 (Vol. V), paras. 79-83).

Figure V
Volume of change orders occurring each year since construction started



Source: Board analysis of the Administration's data.
Note: Renovation work commenced in May 2008.

Claims

23. Of the three previously reported claims from contractors, two had been resolved and one remains under negotiation. Given the significant time and cost pressures of the project and the demanding schedule for the completion of the

[12] A change order is a mechanism for changing the details of a contract and can arise for a number of reasons, for example, the discovery that the condition of a building is worse than expected or the need to work more hours than contracted for. Change orders result in higher-than-expected costs.

General Assembly Building, it is possible that more claims may be made towards the end of the project as contractors are required to work at or near maximum capacity. The Administration makes some allowance for known claims in its forecasting and for the main contractor's contingency provisions, and where claims are settled they are included in the anticipated final cost. But no allowance is made for unknown claims in the anticipated final cost.

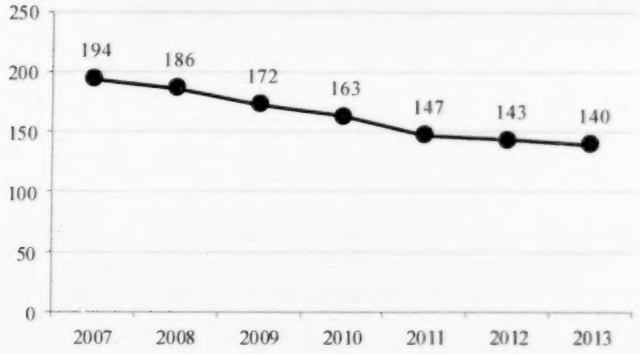
Acceleration

24. To meet the deadline for the general debate in September 2014, work on the General Assembly Building requires acceleration, with contractors achieving this by either extending working hours or increasing the workforce. Further acceleration beyond the tight schedule already agreed upon with contractors may be necessary to deliver the General Assembly Building in time for the general debate. This is reflected in part by the increase in the cost of the contract for the refurbishment of the General Assembly Building to $125 million from the initial budget assumption of $104 million in 2013. The increase was funded from unused contingency provisions and savings on earlier procurements. The Administration estimates that additional acceleration beyond that already purchased under the contract will cost no more than $1 million, and plans to fund these costs from reported and unreported contingency provision.

Associated costs that may be met from other budgets

25. Associated costs represent activities essential to the successful completion of the project. In March 2014, the Administration reported to the General Assembly a final total of $140 million in associated costs, reflecting a 28 per cent decrease compared with the Administration's original estimate (see A/62/799 and **figure VI**). The figure may understate actual expenditure incurred, as it assumes no further expenditure after the biennium 2012-2013, even though renovation activities for the capital master plan are scheduled to continue into 2015. For example, the Department of Safety and Security estimates that it will spend at least $1.8 million from its regular budget in 2014 alone on providing security for capital master plan activity.

Figure VI
Reported estimates of total associated costs
(Millions of United States dollars)



Source: Board analysis of the Administration's data.
Note: Value in 2013 represents the Administration's data after financial close-out.

Project funding

Funding gap

26. The $155 million in unbudgeted costs (associated costs and secondary data centre) and the anticipated $224 million construction cost overrun has resulted in a total anticipated cost overrun against budget of $379 million. In December 2012, the Administration secured the General Assembly's approval (see resolution 67/246) of $71 million in additional funding from a combination of the working capital reserve and accumulated interest income.[13] In December 2013, the Assembly approved a further $86.5 million of the working capital reserve fund and $1.9 million of future interest income (see resolution 68/247). Those decisions resulted in a reduced funding gap of $220 million.

27. The Administration has to date met the $155 million in unbudgeted costs from within the project budget, threatening the cash flow of the project. The Secretary-General, in the update of his eleventh annual progress report on the implementation of the capital master plan (A/68/352/Add.2), indicated that this was no longer a viable option and that no funds would be available to proceed with the project as from July 2014. In April 2014, the General Assembly authorized use of the working capital fund and the special account[14] as a bridging mechanism to finance the project to completion. The latest estimates of the balances of the working capital fund and the special account are $150 million and $235 million, respectively. The General Assembly intends to revisit this matter in late 2014 (at the main part of its sixty-ninth session).

28. The Administration is proposing to use the $65 million originally budgeted for the renovation of the Library and South Annex Buildings to fund the $65 million gap in construction funding. If approved by the General Assembly, the overall cost overrun will remain as currently forecast, the funding gap will decrease and the cost of those elements of the project that remain in scope will have increased.

29. The Board supports the need for those funding a multi-year major project to be absolutely convinced of the need for any increase in funding, but reiterates its previous concerns that clarity and confidence with respect to funding are vital if all those involved, including contractors, are to be able to proceed with confidence.

C. Project schedule and scope

General Assembly Building

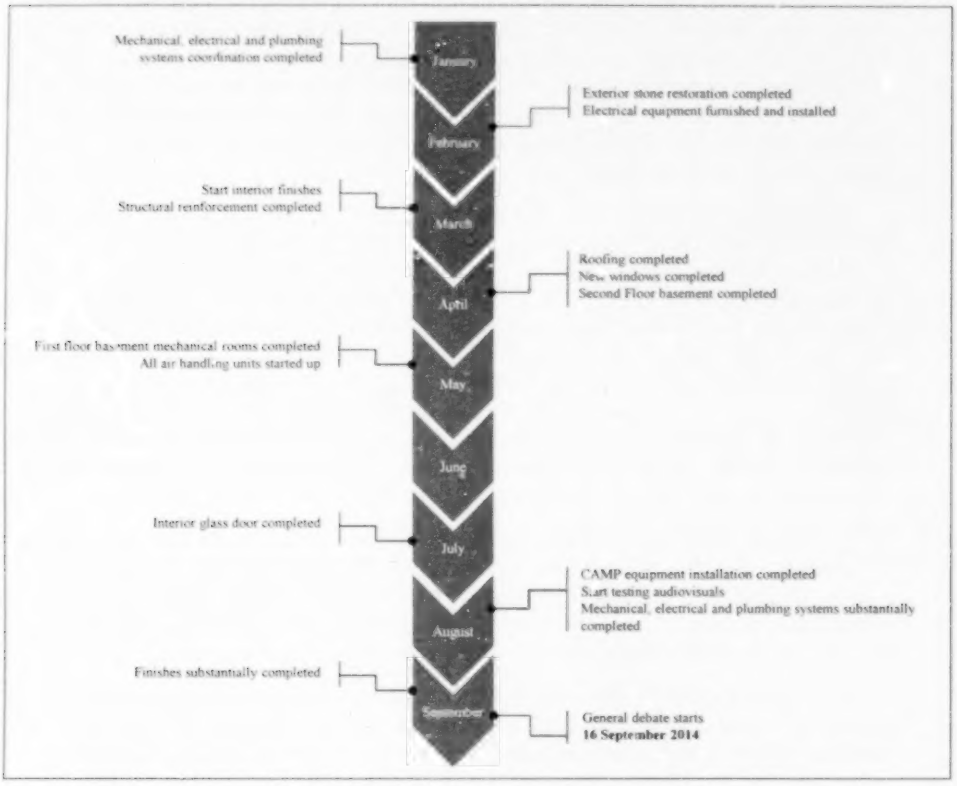
30. At the opening of the sixty-eighth session of the General Assembly, the Secretary-General announced that the General Assembly Building would be renovated in time for the general debate in 2014. The Administration considers that the schedule for the General Assembly Building is demanding but achievable (see **figure VII**). The Board previously highlighted that the renovation schedule for this building had been compressed from 24 to 13.5 months, assuming construction started in May 2013. Site work for the General Assembly Building began in June

[13] The working capital reserve fund for the capital master plan was approved in December 2006 (see General Assembly resolution 61/251). The purpose of this reserve account was to cover temporary cash flow deficits.

[14] The working capital fund and the special account are reserve accounts used to provide short-term liquidity for regular budget operations.

2013, with the start of demolition and abatement activity in August 2013. The schedule has no scope for any further delays.

Figure VII
Key dates in the renovation of the General Assembly Building (2014)



Source: Board analysis of the Administration's written responses to questions from the Fifth Committee.

31. At the time of audit, there were a range of risks to the successful completion of the General Assembly Building within the required time frame, some of which are being managed and others of which are in need of closer management. The Administration has divided the guaranteed maximum price contract for the Building into three separate contracts to reduce the time required for the development of one complete construction document for a single contract. It has instead issued "early works", "infrastructure" and "finishes" as separate packages so that the renovation work will start as quickly as possible and the time for the testing of audiovisual and other equipment will be protected.

32. One option being considered by the Office of the Capital Master Plan is to focus construction activities on only those areas required for the general debate (the General Assembly Hall, meeting rooms, technology rooms and mechanical rooms). This would permit the delivery of "back-of-house" work along with aspects of the work on the basements to be postponed until after September. At the time of audit, the main contractor confirmed that some "less essential" work would be completed

after the general debate, but could not indicate which work or provide a documented and agreed plan for the work to be prioritized or deferred.

33. Adequate time remains for the completion of the renovation, providing there are no serious procurement problems (with respect to either materials or the workforce), significant health or safety incidents or a period of prolonged inclement weather. But a key risk is the limited amount of time being allowed for the testing and commissioning of the mechanical and electrical systems, in particular the audiovisual systems within the General Assembly Hall and associated links to other areas of the General Assembly Building.

34. The project timeline for the completion of the renovation of the General Assembly Building by 1 August 2014 will allow six weeks for the testing and commissioning of systems. This compares with the four months required for the testing of the audiovisual systems in the Conference Building. The Administration remains confident that six weeks of testing in the General Assembly Building will be sufficient on the basis of lessons learned from the Conference Building, for example, opting for a simplified system, with some testing occurring offsite.

35. Sufficient time is also needed for the testing of security arrangements. For example, the Department of Safety and Security requires at least three to four weeks to test alarms, access control, closed-circuit television, doors, and fail-safes and to make sure that the escalators work. In addition, Member States' security officers will need adequate time to survey the building before the general debate. At the time of audit, the precise timing of security testing had not been finalized.

36. Other risks to the readiness of the General Assembly Building in time for the general debate, or to the delivery of the Building within the current cost estimate, include:

- A lack of clarity with respect to agreed completion criteria at handover and assigned responsibilities for items that are critical to achieving completion;
- The emergence of construction-related claims and the amount of time it could take to process new change orders;
- The loss of key staff members of the Office of the Capital Master Plan or the main contractor (which could potentially affect the flow of project processes and information);
- Delays in establishing the required maintenance contracts, jeopardizing the operational running of the campus;
- The delayed completion of work on less visible areas in the General Assembly Building, potentially conflicting with terms agreed upon with contractors.

Library and South Annex Buildings

37. Owing to security concerns about blast resilience and the proximity of the FDR Drive off-ramp, the Office of the Capital Master Plan suspended design work on the Library and South Annex Buildings in 2011.[15] While the Library and South Annex

[15] Studies undertaken to evaluate the resilience of the Buildings to threats from adjacent roadways determined that neither Building could be successfully renovated to achieve a reasonable level of safety. This is attributable to the original structure of the buildings themselves, which are relatively lightweight; the close proximity of the FDR Drive to the South Annex Building; and the proximity of the FDR Drive off-ramp to both Buildings.

Buildings remain in scope, the current schedule and cost forecast of the capital master plan assume that there will be no renovation of these buildings. The Administration estimates that the cost of their replacement could be between $350 million and $450 million, compared with an original renovation budget estimate of $65 million. The alternative is to seek a solution with the host city involving the relocation of the FDR Drive off-ramp, potentially as part of a wider redevelopment of the land immediately to the south of the campus.

38. In February 2014, the Permanent Mission of the host country wrote to the United Nations confirming that it would not be feasible to close or relocate the FDR Drive off-ramp. To date, the General Assembly has not authorized the removal of the Library and South Annex Buildings from the project, nor has it decided whether the $65 million budget for the work can be redirected to finance the project's cost overrun. In resolution 67/246, the General Assembly requested updated information and options, including financial implications, with regard to the renovation of these buildings.

39. In its previous report, the Board stated that any decision on the proposed use of the $65 million should be linked to an understanding of any options and associated costs for the rehousing of the functions carried out in the Library and South Annex Buildings. At the sixty-eighth session, the Administration outlined the cost of a number of options, including replacing the buildings and rehousing their functions (see A/68/352 and A/68/352/Add.2). If the Administration's plan to fund the cost overrun through the use of the $65 million, originally budgeted for the Library and South Annex Buildings, is approved, any alternative options will require additional financing. It is also now likely that any solution will be defined after the completion of the capital master plan.

Overall schedule

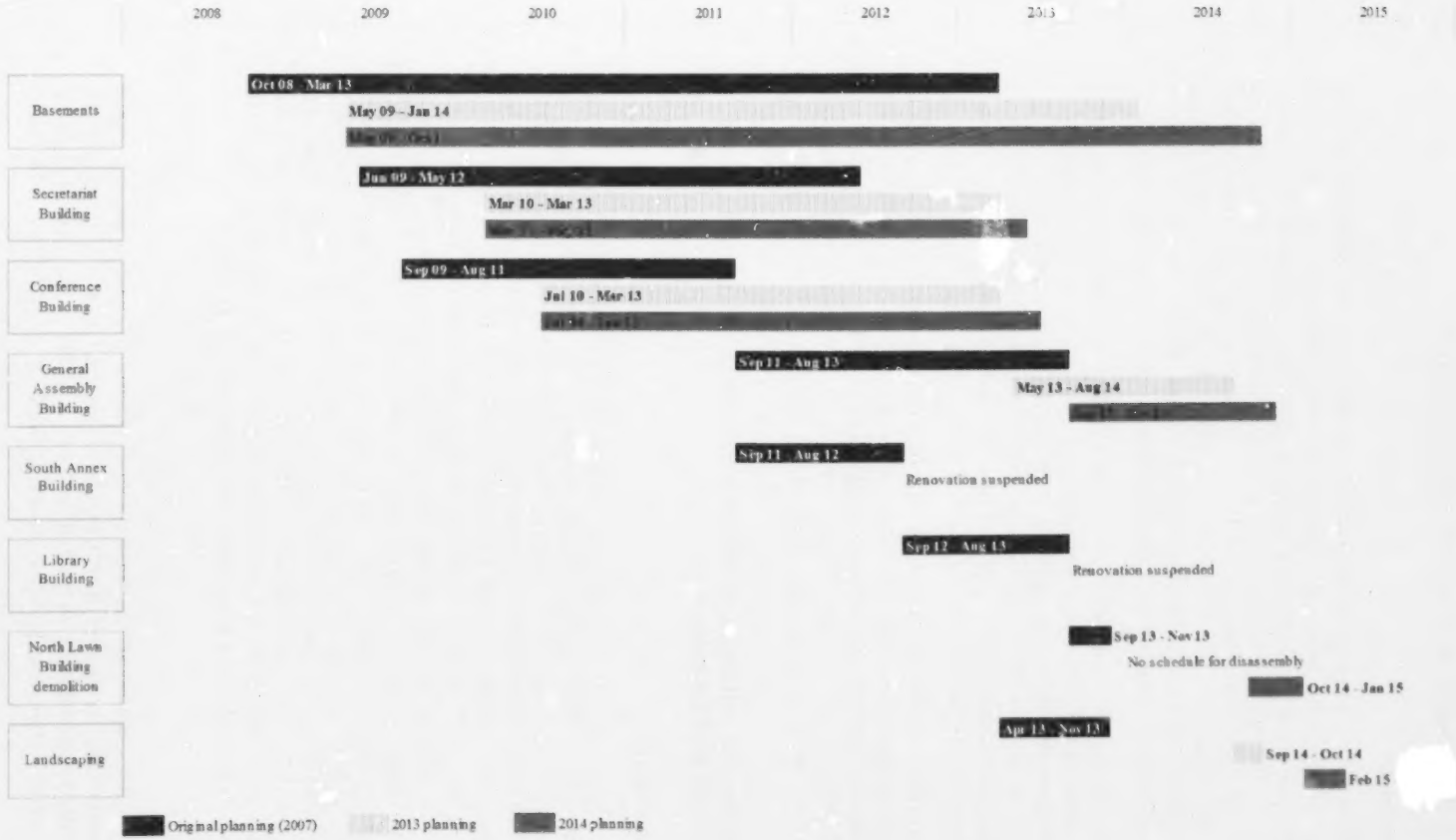
40. The capital master plan is nearing completion, and the risks to the project are diminishing. As at March 2014, the Secretariat Building was complete, having been handed over in July 2013. The Conference Building was substantially complete in April 2013, but a number of outstanding items need to be resolved before final handover. The South Screening Building was opened to staff in February 2014. The basements and the North Screening Building are expected to be completed in October 2014.

41. The Administration's current planning assumes that the Office of the Capital Master Plan will close at the end of June 2015. Subsequently, work on the service drive on 42nd and 48th Streets will not be delivered by the capital master plan. The Administration is awaiting permits from the host city to start this task, and informed the Board that the Office of Central Support Services would assume responsibility and the estimated $15 million and $20 million budgets for the completion of the work (see **figure VII**).

42. **The Board makes a recommendation on project scope in paragraph 25 (a) of the summary.**

Figure VIII

Comparison of current schedule against last year's planning and accelerated strategy IV



Source: Board analysis of the main contractor's master schedules.

Notes:

The dates reflect construction or renovation activity; it excludes the financial and administrative close-out of subprojects.

Timelines reflect non-accelerated work.

2014 planning reflects main contractor's schedule as at February 2014. At the time of audit, this included work on the service drive on 42nd and 48th Streets, which was under contract for basements. Subsequently, this aspect will not be delivered by the project and the Office of Central Support Services will assume responsibility for project management.

D. Managing the project to a successful completion

Project governance

43. The Board has commented previously on the need for effective project governance, including the need for a project steering committee. The governance arrangements for the project have not changed since the issuance of the Board's previous report. The Administration continues to provide quarterly progress and cost briefings to the Fifth Committee, the Advisory Committee on Administrative and Budgetary Questions and the Management Committee. In addition, the Project Director continues to provide weekly updates on the project for the Executive Management Group, chaired by the Under-Secretary-General for Management.

44. The Board has previously highlighted that organizations undertaking a project of this size and complexity would typically put in place a system of integrated assurance to provide senior management with expert advice, independent of the project team. While the Office of the Capital Master Plan uses the services of external programme management consultants, the consultants are part of, not independent of, the project team.

45. The Board recommended that the Under-Secretary-General for Management, as senior responsible owner, consider obtaining independent technical advice on the likelihood that the General Assembly Building would be completed in line with the existing deadline, specifications and cost. The Under-Secretary-General Management's view was that, at this stage of the project, such assurance was not required.

46. **The Board has reiterated its previous recommendation on assurance in paragraph 25 (b) of the summary.**

Project team capacity

47. As the project reaches its conclusion, project staff will, understandably, begin to seek other roles. Without appropriate incentives or clarity with respect to potential future roles, there is a risk that staff will leave and be unable to be quickly replaced before project completion, increasing the challenge of successfully closing out the project. For example, in 2014 it took almost five months to fill a finance and budget post in the Office of the Capital Master Plan. The Administration hopes that the profile and prestige of the project are sufficient to retain staff, especially architects and engineers, until its completion, but the Office of the Capital Master Plan considers staff leaving critical posts early, and the resulting loss of knowledge and expertise, to be a key risk. There is no plan to mitigate that risk, although the Board drew attention to the issue in 2011. In the meantime, the project team had been reduced in size from 26 staff and 12 support staff in 2012 to 22 staff and 7 support staff as of March 2014. Cost pressures have also led to reductions in the number of cost consultants and in the size of the main contractor's team.

Handover

48. Effective management of the handover is essential to making the transition from a renovation project to everyday operations. Decisions made at that point are the key to realizing the benefits envisaged at the start of the project. Good practice is to conduct an objective assessment as to when buildings or systems will be ready

for handover so as to ensure no disruption to day-to-day operations. This has proved challenging in terms of the capital master plan. At the time of audit, there was no single point of accountability for managing the handover process, and staff told the Board that that process had involved more effort and time than anticipated. There is a risk that this will lead to delays in decision-making and unnecessary cost.

49. Until December 2013, the Administration had a dedicated capital master plan coordination team of three staff from the Office of Central Support Services, co-located with the Office of the Capital Master Plan. The funding of the team ceased in December 2013, as it was assumed that activities funded by associated costs would not continue after that date. While funding for a single post has been extended for nine months into 2014, handover activities will continue until the final completion of the project in 2015.

50. The Office of the Capital Master Plan is handing over parts of the campus as work is completed. The phased approach to handover has presented the Office of Central Support Services with a challenge in terms of achieving best value for money with its maintenance contracts, because it increases the difficulty of presenting the totality of the project's scope to facilities management suppliers and potentially achieving better prices. It also increases the level of challenge, given the need to coordinate multiple handovers and to identify the full range of maintenance contracts that need to be in place and the date by which that must happen. Conferencing and security systems will also require maintenance contracts. The Office of Information and Communications Technology will eventually be responsible for maintaining these systems, but the date on which it will become responsible for doing so is not yet known.

51. In the light of the phased handover approach, the Office of Central Support Services is using various approaches to organize maintenance. **Table 3** shows that in the majority of instances, it has established maintenance contracts that were either formalized prior to the handover of the related functions or extended using existing service contracts. Where maintenance contracts were not arranged in time, the related functions are serviced by in-house staff or through ad hoc arrangements, such as using the main contractor to organize and manage temporary maintenance. The Office of Central Support Services has also used short-term warranties for the permanent broadcast facility and the media asset management systems in the absence of maintenance contracts, which are under vendor warranties until the end of 2014.

52. **The Board makes a recommendation on maintenance requirements in paragraph 25 (c) of the summary.**

Table 3
Maintenance arrangements as at 30 June 2014

		Maintenance arrangement in place as at June 2014			
Area	*Number of systems to be maintained*	*Contract*	*In-house*	*Use of warranty*	*Pending*
Building maintenance	24	8	9	–	7
Broadcasting equipment	10	–	3	7	–

Source: Board analysis of the Administration's data.

Benefits realization

53. There has been a strong and expert focus on technical project delivery, but less evidence of a robust approach to defining benefits and a plan for realizing them. As the project nears completion, it should become clearer to the funders what benefits can be delivered. The outcomes expected from the project were qualitative and ill defined and lacked an objective measure by which to judge success. Nor were any space utilization or related efficiency targets defined. Without the quantification of desired or target performance, calculating a return on investment is impossible.

54. In his report articulating the need for the capital master plan (A/55/117), the Secretary-General reported that the estimated energy costs of the campus would increase from $10 million in 2001 to $28 million in 2027.[16] The major quantified benefits of the capital master plan are proposed improvements in environmental performance: a 50 per cent reduction in energy consumption, a 40 per cent reduction in fresh water consumption and a 45 per cent reduction in CO_2 emissions. The Administration told the Board that it intended to start reporting energy efficiencies by the end of 2015. The Administration is installing equipment and systems to collect data on utility consumption and intends to assess performance against consumption prior to the capital master plan by each individual building.

55. The Board warns against an expectation that the Office of Central Support Services will be able to reduce the level of the budget for the refurbished campus on the basis that newly renovated buildings should require less maintenance effort. The opposite could be true, as more sophisticated plant and equipment may need constant care. A robust analysis should be undertaken of operational data, such as energy consumption patterns and instances of malfunction, in order to set a correct annual maintenance budget that reflects the long-term maintenance of renovated buildings and new systems.

Flexible workspace strategies

56. In its resolution 67/254 A, the General Assembly requested the Secretary-General to prepare a report on United Nations Headquarters long-term accommodation needs, including the impact of the implementation of flexible work arrangements on the capacity of buildings. In response, in March 2013 the Administration established a cross-functional working group chaired by the Office of Central Support Services to establish a way forward on flexible workspace strategies. The Administration will present a business case to the Assembly at its sixty-ninth session.

57. The Administration's own recent assessment of flexible workspace strategies is that it could achieve at least a 20 per cent space savings from its current planning figure of 220 square feet per person, and improve staff productivity, satisfaction, retention and mobility, while reducing real estate costs.

58. The Administration will start a communications programme to engage and educate staff and then pilot flexible workspace as from July 2014. In response to the Board's previous recommendation, the Administration is collecting building occupancy data to inform understanding of its future estate requirements. The Administration undertook a preliminary study of actual utilization in which six floors in the Secretariat and DC-1 Buildings were observed over a four-day period.

[16] Figures are adjusted for inflation and expressed in constant prices (2000).

Average utilization was observed to be approximately 50 per cent, peaking at 70 per cent, with a low of 30 per cent. The Administration informed the Board that it was undertaking a comprehensive study of actual space utilization and that it should have more accurate data by the end of 2014. The data will be used to inform the business case for flexible workspace to be presented to the General Assembly at its sixty-ninth session.

59. Implementing any flexible workspace strategy is a challenging change management activity. It will require visible senior management sponsorship and leadership, but it is currently unclear how the leadership of the project will be organized. The concept of flexible working also aligns with other change programmes that the United Nations is undergoing, which need to be understood holistically in order to accurately inform operational needs. For example, the deployment of the new enterprise resource planning system (Umoja) and a possible new global service delivery model could have an impact on staffing and office space requirements for the United Nations.

60. **The Board makes a recommendation on flexible workspace in paragraph 25 (d) of the summary.**

Long-term asset management

61. The United Nations does not have a long-term asset management plan in place for the newly renovated campus in New York or globally for the United Nations estate. The adoption of the International Public Sector Accounting Standards will require that the estate and buildings be identified and valued appropriately, aiding the development of a longer-term asset management strategy for the Administration. The Office of Central Support Services is gathering data on properties to inform a 20-year capital programme and prioritization strategy for better management of the global estate (the "strategic capital review"). The results will be presented to the General Assembly at its sixty-ninth session.

62. The strategic capital review is aimed at providing an informed understanding of future capital requirements and approaches to asset management. Preliminary findings (see A/68/733) indicate that the Administration's reactive approach to capital maintenance results in the rapid deterioration of assets, leading in turn to the need for emergency repairs and periodic large-scale construction projects. A proactive maintenance approach invests more fully in order to maintain a building or estate in good condition. As also noted in the preliminary findings, with the exception of the offices at Nairobi and Vienna, the United Nations invests less than 1 per cent capital relative to property value on an annual basis, compared with industry best practice of 2-3 per cent per year. Typically, organizations set up a sinking fund to provide sufficient annual returns to cover capital investment in fixed assets, but it is unclear what proposals the Administration will make.

63. As previously reported, it is unrealistic to expect that the Administration will be able to reduce the level of the maintenance budget allocated to the newly refurbished campus on the basis that the renovated building should require less maintenance effort. The opposite could be true, as more sophisticated plant and equipment may require more frequent and skilled care. The Office of Central Support Services estimates that for the biennium 2014-2015, $5 million in savings from reduced utility costs will be offset by the increased cost of maintaining systems and equipment.

Capturing and applying the lessons learned

64. As mandated by the General Assembly in its resolution 67/246, the Office of the Capital Master Plan undertook an exercise involving key stakeholders to identify lessons learned for use by future capital projects. A summary of its outcome was presented in the eleventh annual progress report of the Secretary-General on the implementation of the capital master plan (A/68/352). There is currently no mechanism for embedding these lessons in the management of future major projects because, unlike most other organizations, the United Nations does not have an established approach to managing the delivery of major projects.

65. The Office of the Capital Master Plan met with representatives of the strategic heritage plan to discuss its experience and provided input to a report of the Joint Inspection Unit on the management of capital projects in the United Nations system. In addition, the Department of Management is exploring the possibility of transferring staff from the Office to other capital or accommodation projects, although this work is at an early stage.

66. The Board has summarized the main lessons learned from its coverage of the capital master plan for the Administration to draw upon when starting future major projects. The Board has also engaged informally with representatives of the strategic heritage plan to discuss lessons from the capital master plan.

67. The Administration is applying learning from the capital master plan to the strategic heritage plan. Unlike the capital master plan, the strategic heritage plan incorporates the associated costs as part of the total project requirements and proposes a governance structure, including a steering committee independent of the project team, to scrutinize the cost, schedule and scope of the renovation of offices in Geneva and decide on the use of contingency funding as recommended by the Advisory Committee on Administrative and Budgetary Questions (see A/68/585). The Administration is considering more independent finance reporting, with direct reporting to the governing body rather than through the project team.

E. Acknowledgement

68. The Board wishes to express its appreciation for the cooperation and assistance extended to its staff by the Under-Secretary-General for Management, the Assistant Secretary-General for the Capital Master Plan and members of their staff.

(*Signed*) Sir Amyas C. E. **Morse**
Comptroller and Auditor General of the
United Kingdom of Great Britain and Northern Ireland
Chair of the Board of Auditors
(Lead Auditor)

(*Signed*) **Liu** Jiayi
Auditor General of China

(*Signed*) Ludovick S. L. **Utouh**
Controller and Auditor General of the
United Republic of Tanzania

30 June 2014

Annex I

Key stages in developing the strategy and budget of the capital master plan

Late 1990s	The need for a total refurbishment of the Headquarters campus was identified.
2000	In June, the Secretary-General articulated the need for refurbishment and presented a range of potential approaches (see A/55/117). The preferred option was a six-year refurbishment, costing some $964 million and involving construction activity of up to 30 per cent of the campus at any one time.
	In December, the General Assembly, in its resolution 55/238, authorized the design plan and cost analysis for the capital master plan, which was initially funded through an appropriation from the United Nations regular budget.
2002	In December, the General Assembly decided, in its resolution 57/292, to implement the capital master plan with a projected construction budget of $1,049 million. The Assembly also established a special account for the capital master plan with appropriations from assessments of Member States.
2003	In February, the Secretary-General established the Office of the Capital Master Plan.
2005	In November, in his third annual progress report (A/60/550), the Secretary-General proposed four strategic options following the development of design and cost estimates and the failure of plans for a UNDC-5 building, which was to accommodate swing space.
	The preferred option is strategy IV (phased approach), with a revised budget of $1,588 million.
2006	In June, the General Assembly, in its resolution 60/282, approved strategy IV as outlined in the Secretary-General's third annual progress report.
	In October, in his fourth annual progress report (A/61/549), the Secretary-General explained that the budget for strategy IV had increased to $1,877 million because market conditions had increased construction costs and professional fees, and there was a need for additional scope, including extra blast security and information technology backup systems and security.
	In December, the General Assembly, in its resolution 61/251, approved the revised project budget of $1,877 million and the proposed phased approach to construction.
2007	In September, the Secretary-General, in his fifth annual progress report (A/62/364 and Corr.1), noted delays in implementing strategy IV because of the complexities of United Nations decision-making and the resignation of the project's Executive Director.
	The estimated final cost of the project was now $2,096 million, some $220 million over budget, mainly because of slippage in the schedule and the associated impact of price inflation on construction and rental costs.
	The Secretary-General proposed an accelerated strategy IV, involving a shorter period of renovation, fewer phases of construction and less disruption to United Nations operations. The estimated final cost of this accelerated approach was $2,067 million, some $190 million above budget.
	In December, the General Assembly, in its resolution 62/87, approved accelerated strategy IV and reiterated its request to the Secretary-General to ensure that the capital master plan was completed within the budget as approved in its resolution 61/251. Accelerated strategy IV remains the current approved strategy.

2009	In April, the General Assembly, in its resolution 63/270, requested the Secretary-General to make proposals to allow Member States to make donations to offset costs of the project.
	In December, the General Assembly, in its resolution 64/228, decided that the approved associated costs would be financed from within the approved budget for the capital master plan. It also encouraged the Secretary-General to pursue value engineering so as to maximize cost savings to complete the project within its approved budget.
2011	In October, the Secretary-General, in his ninth annual progress report (A/66/527), reported that the host country had provided $100 million for enhanced security upgrades.
	The project had also identified some $100 million in savings from value engineering. Consequently, the estimated final cost was $2,061 million, some $74 million above budget.
2012	In April, the General Assembly, in its resolution 66/258, approved additional commitment authority of $135 million.
	In September, in his tenth annual progress report (A/67/350), the Secretary-General proposed that the renovation of the Library and South Annex Buildings be suspended because of the lack of an agreement on security with the host country.
	The estimated final cost of the project was now $2,228 million, excluding associated costs, some $240 million above budget.
	The Secretary-General proposed total cost reductions amounting to $16 million, $65 million in savings from the suspension of the renovation of the Library and South Annex Buildings, and the application of $159 million from the balance of interest income and the working capital reserve funds, as well as the future interest income, to reduce the cost overrun.
	In December, the General Assembly authorized additional commitment authority of $168 million in its resolution 67/246, but did not accept proposals to suspend the renovation of the Library and South Annex Buildings. It approved $13 million of the proposed cost reductions and the use of $71 million from the working capital reserve fund.
2013	In August, in his eleventh annual progress report (A/68/352), the Secretary-General reported the completion and occupancy of the Secretariat and Conference Buildings and the commencement of the renovation of the General Assembly Building.
	The estimated final cost of the completion of the project was $2,215 million, excluding associated costs, some $153 million over budget. The Secretary-General proposed that the cost overrun be met from the $65 million renovation budget for the Library and South Annex Buildings and the $88 million balance of the working capital reserve fund.
	The Secretary-General also reported that without a decision on additional financing of associated costs and the secondary data centre, the cash balance would be fully utilized by mid-2014, forcing the project to cease.
	In September, the general debate was held in a reconfigured North Lawn Building for use as a temporary General Assembly Hall. The Secretary-General announced that the General Assembly Building would be renovated in time for the general debate in September 2014.
	In December, the General Assembly, in its resolution 68/247 A, approved the application of the remaining $88 million of the working capital reserve fund to the project.
2014	In April, the General Assembly, in its resolution 68/247 B, authorized the Secretary-General to make use of the working capital fund and the special account as a bridging mechanism to finance the associated costs and secondary data centre. A decision on whether to replenish the reserve funds through a budget assessment is scheduled for the sixty-ninth session.

Annex II

Budget and anticipated final cost estimates from the progress reports of the Secretary-General

(Thousands of United States dollars)

	Strategy IV	*Accelerated strategy IV*							
	Approved as of 2006	*Status as of August 2007*	*Status as at September 2008*	*Status as of September 2009*	*Status as of September 2010*	*Status as of May 2011*	*Status as of July 2012*	*Status as of June 2013*	*Status as of January 2014*
Construction	935 300	964 625	1 032 900	1 057 402	1 016 920	1 058 714	1 206 003	1 219 950	1 226 559
Enhanced security upgrade construction	–	–	–	–	–	82 185	82 628	82 628	82 628
Professional fees, management costs	231 000	234 508	280 340	302 365	316 549	326 994	368 290	368 831	368 874
Enhanced security upgrade fees	–	–	–	–	–	10 713	10 713	10 713	10 713
Swing space fit-out and rental	214 500	389 858	425 695	426 881	421 113	529 679	511 819	511 819	511 819
Contingency	199 900	199 859	235 236	181 423	202 209	89 084	41 638	14 150	7 721
Forward price escalation	296 000	277 960	–	–	–	–	–	–	–
Enhanced security upgrade contingency	–	–	–	–	–	6 659	6 659	6 659	6 659
Anticipated cost of capital master plan	**1 876 700**	**2 066 810**	**1 974 171**	**1 968 071**	**1 956 791**	**2 104 028**	**2 227 750**	**2 214 750**	**2 214 973**
Approved budget	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)	(1 876 700)
Contributions from Member States	–	–	–	–	–	(110 500)	(110 689)	(113 689)	(113 912)
Project (construction) cost overrun	**0**	**190 110**	**97 471**	**91 371**	**80 091**	**116 828**	**240 361**	**224 361**	**224 361**
Working capital reserve fund								(71 000)	(159 400)
Funding (construction) shortfall	**0**	**190 110**	**97 471**	**91 371**	**80 091**	**116 828**	**240 361**	**153 361**	**64 961**
Associated costs					162 485	146 806	143 139	141 409	140 253
Secondary data centre					19 770	20 700	19 488	19 268	19 268
Contribution for secondary data centre					(4 228)	(4 228)	(4 228)	(4 228)	(4 228)
Total cost overrun for United Nations					**258 118**	**281 034**	**398 760**	**309 810**	**220 254**

Source: Board analysis of progress reports of the Secretary-General on the implementation of the capital master plan.

Notes:

From the sixth annual progress report (A/63/477) onwards, the Administration stopped reporting contingency and forward price escalation separately.

Estimates of total expenditure for associated costs and the secondary data centre were reported routinely from the eighth annual progress report (A/65/511) onwards.

Annex III

Status of implementation of recommendations

No.	Summary of recommendation	Paragraph reference	Financial period in which first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board's comments on status as at April 2014
1	The Administration agreed with the Board's recommendation that it develop a cost-time trade-off criterion, to guide decisions on whether it is worth making acceleration payments or better value for money to accept a delay	28	2011					X	This recommendation was under implementation, but given the status of the project is assessed as not implemented; the Board closes the recommendation
2	The Administration agreed with the Board's recommendation that it urgently take stock and rebuild the anticipated final cost of the project. The rebuilt anticipated final cost should include estimates for the likely cost of: (a) identified project risks; (b) change orders until project completion; (c) acceleration activities in order to meet the project schedule; (d) claims that have been submitted and an allowance for future claims; (e) up-to-date estimates for remaining guaranteed maximum price contracts (by revalidating prices and setting a realistic level of contingency based on lessons from previous guaranteed maximum price contracts); and (f) the costs for altering off-site office locations, to the extent that they will be met by the capital master plan budget	32	2011					X	This recommendation was under implementation, but given the status of the project is assessed as not implemented; the Board closes the recommendation
3	The Administration agreed with the Board's recommendation that the anticipated final cost be recalculated and reported on a quarterly basis from now until the project's completion	34	2011	X					Implemented, as indicated in the Board's previous report
4	The Board further recommends that senior management in the Administration put in place appropriate controls such that they can clearly demonstrate to the General Assembly that assurance can be placed on the reported cost forecasts	35	2011					X	This recommendation was under implementation, but given the status of the project is assessed as not implemented; the Board closes the recommendation

No.	Summary of recommendation	Paragraph reference	Financial period in which first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board's comments on status as at April 2014
5	The Administration agreed with the Board's recommendation that once it has prepared a complete and robust anticipated final cost, it should set out the timeline for all remaining project commitments, being clear about the effect that delayed, or partial, release of funding will have on the costs and timing	41	2011	X					Progress reports show spending to date and future commitments, including cash flow analysis
6	The Administration agreed with the Board's reiterated recommendation that it: (a) resolve the security issues and lack of a viable design solution for the Library and South Annex Buildings as a matter of urgency; (b) if it is proposed that the two buildings remain in scope, make clear what the approach to resolving the security challenges should be; and (c) seek approval for the proposed course of action from the General Assembly	50	2011	X					Implemented, as indicated in the Board's previous report
7	The Administration agreed with the Board's recommendation that, if the Library and South Annex cannot remain in scope, it present the General Assembly with costed options for accommodating the facilities which are currently housed in these buildings. The Administration committed to implementing this recommendation at the sixty-seventh session of the General Assembly	51	2011					X	The Administration presented options, but the fundamental issue remains. This recommendation is closed by the Board and superseded by a later recommendation (sixty-eighth session — para. 54)
8	The Administration agreed with the Board's recommendation that it seek approval from the General Assembly for any proposals to reduce the scope of planned work to the General Assembly Building. The Administration committed to implementing this recommendation at the sixty-seventh session of the General Assembly	52	2011	X					Implemented, as indicated in the Board's previous report

No.	Summary of recommendation	Paragraph reference	Financial period in which first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board's comments on status as at April 2014
9	The Board recommends that the Administration urgently establish more effective and regular governance over the capital master plan. The Under-Secretary-General for Management needs to determine how he can assure himself that cost and progress forecasts are accurate, especially where areas of technical construction judgement are involved. The Board is aware that typically, in a project of this nature, senior management would be supported by expert advice which is independent of the project team	55	2011					X	Assessed as under implementation in the Board's previous report. Given the status of the project, the Board closes the recommendation
10	The Administration agreed with the Board's recommendation that, drawing on the lessons from the capital master plan, it consider how in future it can manage contingency funding on capital projects in a more transparent and effective manner	62	2011					X	This recommendation was assessed as under implementation in the previous report. This recommendation is closed by the Board and superseded by a later recommendation (see A/68/5 (Vol. V), para. 39)
11	The Administration agreed with the Board's reiterated recommendation that the Office of the Capital Master Plan significantly reduce the processing time and backlogs in the change order approvals process	76	2011	X					Implemented, as indicated in the Board's previous report
12	The Administration agreed with the Board's recommendation that the Department of Management: (a) pilot the implementation of flexible working strategies which move away from a one-person-to-one-desk ratio; and (b) assess the potential operational and financial impact of adopting flexible workplace strategies to reduce the future space needs of the United Nations in the context of any proposals for renovating existing, or acquiring new, office space	83	2011		X				The Board acknowledges progress made by the Administration, as noted in the present report, with regard to part (a) of this recommendation

No.	Summary of recommendation	Paragraph reference	Financial period in which first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board's comments on status as at April 2014
13	The Board reiterates its previous recommendations on the process for determining the anticipated final costs	38	2012					X	Assessed as under implementation in the Board's previous report. Given the status of the project, the Board closes the recommendation
14	The Board recommends that for future projects of this nature the Administration develop a risk-based approach to determining, allocating and reporting contingency funds based on best practice in modern project management	39	2012		X				As stated in the present report, the Board considers this recommendation to be under implementation, but given the stage of the project, considers the recommendation to be closed for the capital master plan The Board acknowledges that there have been developments in the wider planning and reporting of contingency funding for major capital projects, for example the strategic heritage plan. As the United Nations does not have a consistent and established approach to contingency management, this recommendation is assessed as not implemented. At this point, contingency management is the remit of whichever administration has programmatic responsibility for any given projects
15	The Board recommends that as part of the plan to complete the General Assembly Building in time for the general debate in September 2014, the Office of the Capital Master Plan provide the senior responsible owner with clear criteria for when planned contingency measures would be triggered, including a breakdown of costs versus benefits	48	2012					X	This recommendation was not implemented, but given the status of the project, the Board closes the recommendation

No.	Summary of recommendation	Paragraph reference	Financial period in which first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board's comments on status as at April 2014
16	The Board recommends that the Administration produce costed and realistic options to assist the General Assembly in deciding whether to remove the Library and South Annex from the scope of the capital master plan and if so, whether to use the $65 million budget to reduce the current cost overrun	54	2012	X					The Administration has received approval to use the estimated $65 million budget The Administration produced options for the housing of the functions elsewhere
17	In light of the challenging schedule for the General Assembly Building, the Board recommends that the Under-Secretary-General for Management consider obtaining independent technical advice on the likelihood of the General Assembly Building being completed in line with the existing deadline, specifications and cost	59	2012					X	This recommendation was not implemented, but given the status of the project; the Board closes the recommendation
18	The Board recommends that the working group on flexible workspace strategies: (a) gather robust data on building occupancy utilization and occupancy costs per desk in each building, across the entire portfolio of New York permanent and rented space; and (b) use this analysis to better understand its future estate requirements both in New York and across the wider global estate	69	2012		X				The Administration is making clear progress, including the piloting of flexible workspace and the collection of occupancy and utilization data
19	The Board recommends that the Administration formally document and embed lessons from the capital master plan in other emerging projects as it makes its early strategic procurement and delivery choices	72	2012	X					The Administration documented lessons learned from the capital master plan in the eleventh annual progress report of the Secretary-General and is actively using them in the development of the strategic heritage plan. The Board acknowledges the important role that the Office of Central Support Services is playing in this proces . The lack of an established and standard United Nations approach to managing the delivery of major projects means that it is difficult to fully ensure that these lessons are embedded

No.	Summary of recommendation	Paragraph reference	Financial period in which first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board's comments on status as at April 2014
20	The Board recommends that the Administration adopt a whole life cycle asset investment strategy and assess costed options for through-life maintenance of the Headquarters buildings	77	2012		X				The Administration is working to categorize installed building components and assemble the data necessary to establish such a long-term life cycle replacement plan. The overall approach is an integral part of the strategic capital review, which will propose a 20-year capital programme and prioritization strategy for the global premises of the Secretariat, including United Nations Headquarters in New York. The target date for full implementation of this recommendation is 30 June 2015, when the budget proposal for 2016-2017 will be presented to Member States
21	The Board recommends that the Office of Central Support Services review its ongoing maintenance contracts, based on an assessment of the total scope of facilities management requirements after completion of the capital master plan, and assess the possibilities for obtaining better value from any future strategic commercial relationship	82	2012		X				The Board acknowledges that progress has been made in the present report
	Total (2011)			**5**	**1**	**0**	**0**	**6**	
	Total (2012)			**2**	**4**	**0**	**0**	**3**	
	Total			**7**	**5**	**0**	**0**	**9**	
	Percentage share of total			**33**	**24**	**0**	**0**	**43**	

Annex IV

Current funding and cost estimates

Latest approved funding position and costs, including proposed sources of further funding

(Thousands of United States dollars)

	Capital master plan	*Associated costs*	*Secondary data centre*	*Total to United Nations*
Approved budget	1 876 700		4 228	
Donations	13 873			
Enhanced security upgrade	100 000			
Total budget	**1 990 573**		**4 228**	**1 994 801**
Costs				
Building renovation	1 269 283			
Swing space	493 299			
Contingency	6 308			
Professional fees, management costs	346 083			
Enhanced security measures	100 000			
Associated costs		139 524		
Secondary data centre			19 240	
Total costs	**2 214 973**	**139 524**	**19 240**	**2 373 737**
Cost overrun	**224 400**	**139 524**	**15 012**	**378 936**
Funding shortfall plans				
Working capital reserve fund	(159 400)			
Remaining cost overrun	**65 000**	**139 524**	**15 012**	**219 536**

Source: Board analysis of Administration data available as at March 2014.

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